

## CLAIMS:

1. A packaging means for retaining vapour active pyrethroids comprising a holder and a cellulosic based substrate or matrix impregnated and/or dosed with the  
5 vapour active pyrethroid,

wherein the holder comprises a top, a base and a longitudinal member vertically extending from between the top and base, and

wherein the cellulosic based substrate or matrix has  
10 a honeycomb configuration adapted to be retained between the top and base and has a surface area so as to achieve sufficient emanation of the vapour active pyrethroid to control flying insects.

15 2. A packaging means for retaining vapour active pyrethroids comprising a holder and a cellulosic based substrate or matrix impregnated and/or dosed with the vapour active pyrethroid, wherein the holder comprises a top, a base and a longitudinal member vertically extending  
20 from between the top and base, and wherein the cellulosic matrix has a honeycomb configuration adapted to be retained between the top and base and has a surface area so as to achieve sufficient emanation of the vapour active pyrethroid to control flying insects, and wherein the  
25 cellulosic substrate or matrix is comprised of two or more discrete parts.

3. The packaging means according to claim 2 wherein the cellulosic substrate is comprised of two parts.

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4. The packaging means according to claim 3 wherein the two parts are of substantially identical dimensions.

5. The packaging means according to any one of the preceding claims wherein the cellulosic based substrate or matrix has a surface area of about 50 - 5000 cm<sup>2</sup> and a  
5 height of about 8 - 23 cm.

6. The packaging means according to any one of the preceding claims wherein the cellulosic based substrate or matrix has a surface area of about 50 - 5000 cm<sup>2</sup> and a  
10 height of about 17.5 cm.

7. The packaging means according to any one of the preceding claims wherein the cellulosic based substrate or matrix has a surface area of about 180 - 2400 cm<sup>2</sup> and a  
15 height of about 8 - 23 cm.

8. The packaging means according to any one of the preceding claims wherein the cellulosic based substrate or matrix has a surface area of about 180-2400 cm<sup>2</sup> and a height of about 17.5 cm.  
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9. The packaging means according to any one of the preceding claims wherein the cellulosic based substrate or matrix has a grammage of about 12 - 260 gsm.

25 10. The packaging means according to any one of the preceding claims wherein the cellulosic based substrate or matrix has a grammage of about 18 - 40 gsm

11. The packaging means according to any one of the  
30 preceding claims wherein the cellulosic based substrate or matrix has a grammage of about 18 gsm.

12. The packaging means according to any one of the preceding claims wherein the cellulosic based substrate or matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 2-3000 mg/m<sup>2</sup> of surface area.

13. The packaging means according to any one of the preceding claims wherein the cellulosic based substrate or matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 16 - 320 mg/m<sup>2</sup> of surface area.

14. The packaging means according to any one of the preceding claims wherein the cellulosic based substrate or matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 130-320 mg/m<sup>2</sup> of surface area

15. The packaging means according to any one of the preceding claims wherein the cellulosic based substrate or matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 48-960 mg/m<sup>2</sup> of surface area.

16. The packaging means according any one of the preceding claims wherein the cellulosic based substrate or matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 390-960 mg/m<sup>2</sup> of surface area.

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17. The packaging means according to any one of the preceding claims wherein the cellulosic based substrate or

matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 144-2880 mg/m<sup>2</sup> of surface area.

5 18. The packaging means according to any one of the preceding claims wherein the cellulosic based substrate or matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 1170-2880 mg/m<sup>2</sup> of surface area.

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19. The packaging means according to any one of the preceding claims wherein the longitudinal member is releasably attachable to the top, base or both of the top and base.

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20. The packaging means according to any one of the preceding claims wherein the cellulosic based substrate or matrix, or the longitudinal vertically extending member, or both, are capable of being extended so that the top and  
20 base are in an open state or collapsed so that the top and base are in a closed state.

21. The packaging means according to claim 20 wherein the open state allows the vapour active pyrethroid to emanate  
25 into the atmosphere.

22. The packaging means according to claim 20 wherein the closed state substantially seals the cellulosic based substrate or matrix so that a minimal amount of vapour  
30 active pyrethroid is emanated into the atmosphere.

23. The packaging means according to claim 20 wherein the top and base are capable of being maintained in an intermediate state between the open and closed states thereby allowing the amount of surface area of the  
5 cellulosic based substrate or matrix exposed to the atmosphere to be controlled resulting in the control of the amount of vapour active pyrethroid emanated.

24. The packaging means according to any one of the  
10 preceding claims wherein the longitudinal member vertically extending between the top and the base is a column.

25. The packaging means according to claim 24 wherein the  
15 column is collapsible by folding at one or more hinged joints.

26. The packaging means according to claim 24 or claim 25 wherein the column is comprised of one or more parts and  
20 is collapsible by telescopic movement of the one or more parts of the column within the other parts of the column.

27. The packaging means according to any one of claims 24 to 26 wherein the column is comprised of two or more  
25 interfitting parts.

28. The packaging means according to any one of claims 24 to 27 wherein the column is comprised of two or more releasable interfitting parts.

29. The packaging means according to any one of claims 24 to 27 wherein the column is comprised of two or more non-releasable interfitting parts.

5 30. The packaging means according to claim 27 wherein the parts are able to be interfitted by means of a slotted configuration wherein each respective part comprises a slot which fits into the slot of another one or more parts .

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31. The packaging means according to any one of claims 24 to 30 wherein the top is adapted to receive the column through an aperture thereby allowing the top to be moved along the column by a sliding motion so that the holder is  
15 able to be opened by sliding the top away from the base or closed by sliding the top towards the base.

32. The packaging means according to any one of the preceding claims wherein the longitudinal member  
20 vertically extending between the top and the base is a spring.

33. The packaging means according to claim 32 wherein the spring is compressed in the resting state so that the  
25 cellulosic based substrate or matrix is maintained in a collapsed state in the absence of an externally applied force.

34. The packaging means according to claim 32 or claim 33  
30 wherein the spring is uncompressed in the resting state so that the cellulosic based substrate or matrix is

maintained in an extended state in the absence of an externally applied force.

35. The packaging means according to any one of the  
5 preceding claims wherein the holder and cellulosic based substrate or matrix are adapted to allow the cellulosic matrix to be releasably retained in the holder and replaced as required.

10 36. The packaging means according to any one of the preceding claims wherein the holder comprises a slot within the periphery of each of the top and base and the cellulosic based substrate or matrix comprises a card on  
15 each of its ends, wherein the cards are able to be slid within the slots thereby allowing the cellulosic based substrate or matrix to be releasably retained in the holder.

37. The packaging means according to any one of the  
20 preceding claims wherein the cellulosic based substrate or matrix is adapted to receive the longitudinal member through an aperture thereby retaining the cellulosic based substrate or matrix between the top and base.

25 38. The packaging means according to any one of the preceding claims wherein the cellulosic based substrate or matrix is able to be replaced by detaching the top or base, or both, from the longitudinal member, mounting the cellulosic based substrate or matrix about the  
30 longitudinal member, and reattaching the top or base, or both, to the longitudinal member.

39. The packaging means according to any one of the preceding claims wherein the cellulosic based substrate or matrix is able to be removed and replaced without the need to detach either the top or base from the longitudinal  
5 member.

40. The packaging means according to any one of the preceding claims wherein the cellulosic based substrate or matrix is able to be removed and replaced while the top  
10 and base are in a closed position.

41. The packaging means according to any one of the preceding claims wherein the longitudinal member is capable of being stored within the packaging means when  
15 the top and base are in a closed position.

42. The packaging means according to any one of the preceding claims wherein the top further comprises a protruding rim and wherein the base has a means for  
20 engaging the protruding rim to substantially seal the vapour active pyrethroid when the top and base are in the closed state.

43. The packaging means according to any one of the preceding claims wherein the top is a lid.  
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44. The packaging means according to any one of the preceding claims further comprising an end-of-life (EOL) indicator comprising a counter, an indicator display  
30 located on the counter and a gear mechanism adapted to rotate the counter one increment each time the packaging means is extended from a closed position to an open



position and/or collapsed from an open position to a closed position, such that a user is able to ascertain from the display when the packaging means is substantially depleted in vapour active pyrethroid thereby having  
5 reached its EOL.

45. The packaging means according to claim 44 wherein the indicator display is a numeric or colour graphic display.

10 46. The packaging means according to any one of the preceding claims wherein the cellulosic based substrate or matrix is attached to the top and base, wherein the base is able to be surface mounted and is connected to the longitudinal member having a hook on its end, and wherein  
15 the cellulosic substrate or matrix is able to be extended and supported in the extended state by attachment of the top to the hook.

47. A cellulosic based substrate or matrix having a  
20 honeycomb structure that when in an extended state, has a surface area of about 50 - 5000 cm<sup>2</sup> and a height of about 8 - 23 cm.

48. The cellulosic based substrate or matrix according to  
25 claim 47 having a honeycomb structure that when in an extended state, has a surface area of about 50 - 5000 cm<sup>2</sup> and a height of about 17.5 cm.

49. A cellulosic based substrate or matrix according to  
30 claim 47 or claim 48 having a honeycomb structure that when in an extended state, has a surface area of about 180 - 2400 cm<sup>2</sup> and a height of about 8 - 23 cm.

50. The cellulosic based substrate or matrix according to any one of claims 47 to 49 having a honeycomb structure that when in an extended state, has a surface area of about 180 - 2400 cm<sup>2</sup> and a height of about 17.5 cm.

51. The cellulosic based substrate or matrix according any one of claims 47 to 50 having a grammage of about 12 - 260 gsm.

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52. The cellulosic based substrate or matrix according to any one of claims 47 to 51 having a grammage of about 18 - 40 gsm.

15 53. The cellulosic based substrate or matrix according to any one of claims 47 to 52 having a grammage of about 18 gsm.

54. A method of emanating a vapour active pyrethroid into the atmosphere by the use of a packaging means for retaining vapour active pyrethroids comprising a holder and a cellulosic based substrate or matrix impregnated and/or dosed with the vapour active pyrethroid,

wherein the holder comprises a top, a base and a longitudinal member vertically extending from between the top and base, and

wherein the cellulosic based substrate or matrix has a honeycomb configuration adapted to be retained between the top and base and has a surface area so as to achieve sufficient emanation of the vapour active pyrethroid to control flying insects.

55. The method according to claim 54 wherein the cellulosic based substrate or matrix has a surface area of about 50 - 5000 cm<sup>2</sup> and a height of about 8 - 23 cm.

5 56. The method according to claim 54 or 55 wherein the cellulosic based substrate or matrix has a surface area of about 50 - 5000 cm<sup>2</sup> and a height of about 17.5 cm.

57. The method according to any one of claims 54 to 56  
10 wherein the cellulosic based substrate or matrix has a surface area of about 180 - 2400 cm<sup>2</sup> and a height of about 8 - 23 cm.

58. The method according to any one of claims 54 to 57  
15 wherein the cellulosic based substrate or matrix has a surface area of about 180 - 2400 cm<sup>2</sup> and a height of about 17.5 cm.

59. The method according to any one of claims 54 to 58  
20 wherein the cellulosic based substrate or matrix has a grammage of about 12 - 260 gsm.

60. The method according to any one of claims 54 to 59  
wherein the cellulosic based substrate or matrix has a  
25 grammage of about 18 - 40 gsm.

61. The method according to any one of claims 54 to 60  
wherein the cellulosic based substrate or matrix has a grammage of about 18 gsm.

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62. The method according to any one of claims 54 to 61  
wherein the cellulosic based substrate or matrix is

impregnated and/or dosed with vapour active pyrethroid in an amount of about 2-3000 mg/m<sup>2</sup> of surface area.

63. The method according to any one of claims 54 to 62  
5 wherein the cellulosic based substrate or matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 16-320 mg/m<sup>2</sup> of surface area.

64. The method according to any one of claims 54 to 63  
10 wherein the cellulosic based substrate or matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 130-320 mg/m<sup>2</sup> of surface area.

65. The method according to any one of claims 54 to 64  
15 wherein the cellulosic based substrate or matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 48-960 mg/m<sup>2</sup> of surface area.

66. The method according to any one of claims 54 to 63  
20 wherein the cellulosic based substrate or matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 390-960 mg/m<sup>2</sup> of surface area.

67. The method according to any one of claims 54 to 66  
25 wherein the cellulosic based substrate or matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 144-2880 mg/m<sup>2</sup> of surface area.

68. The method according to any one of claims 54 to 67  
30 wherein the cellulosic based substrate or matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 1170-2880 mg/m<sup>2</sup> of surface area.

69. The method according to any one of claims 54 to 68 for controlling any one of mosquitoes, flies, gnats, sandflies, midges, moths.

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70. The method according to any one of claims 54 to 69 for controlling mosquitoes.

71. The use of a packaging means for retaining and  
10 emanating vapour active pyrethroids comprising a holder and a cellulosic based substrate or matrix impregnated and/or dosed with the vapour active pyrethroid,

wherein the holder comprises a top, a base and a longitudinal member vertically extending from between the  
15 top and base, and

wherein the cellulosic based substrate or matrix has a honeycomb configuration adapted to be retained between the top and base and has a surface area so as to achieve sufficient emanation of the vapour active pyrethroid to  
20 repel insects.

72. The use according to claim 71 wherein the cellulosic based substrate or matrix has a surface area of about 50 - 5000 cm<sup>2</sup> and a height of about 8 - 23 cm.

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73. The use according to claim 71 or claim 72 wherein the cellulosic based substrate or matrix has a surface area of about 50 - 5000 cm<sup>2</sup> and a height of about 17.5 cm.

30 74. The use according to any one of claims 71 to 73 wherein the cellulosic based substrate or matrix has a

surface area of about 180 - 2400 cm<sup>2</sup> and a height of about 8 - 23 cm.

75. The use according to any one of claims 71 to 74  
5 wherein the cellulosic based substrate or matrix has a surface area of about 180 -2400 cm<sup>2</sup> and a height of about 17.5 cm.

76. The use according to any one of claims 71 to 75  
10 wherein the cellulosic based substrate or matrix has a grammage of about 12 - 260 gsm.

77. The use according to any one of claims 71 to 76  
15 wherein the cellulosic based substrate or matrix has a grammage of about 18 - 40 gsm.

78. The use according to any one of claims 71 to 77  
wherein the cellulosic based substrate or matrix has a grammage of about 18 gsm.

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79. The use according to any one of claims 71 to 78  
wherein the cellulosic based substrate or matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 2-3000 mg/m<sup>2</sup> of surface area.

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80. The use according to any one of claims 71 to 79  
wherein the cellulosic based substrate or matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 16-320 mg/m<sup>2</sup> of surface area.

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81. The use according to any one of claims 71 to 80  
wherein the cellulosic based substrate or matrix is

impregnated and/or dosed with vapour active pyrethroid in an amount of about 130-320 mg/m<sup>2</sup> of surface area.

82. The use according to any one of claims 71 to 81  
5 wherein the cellulosic based substrate or matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 48-960 mg/m<sup>2</sup> of surface area.

83. The use according to any one of claims 71 to 82  
10 wherein the cellulosic based substrate or matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 390-960 mg/m<sup>2</sup> of surface area.

84. The use according to any one of claims 71 to 83  
15 wherein the cellulosic based substrate or matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 144-2880 mg/m<sup>2</sup> of surface area.

85. The use according to any one of claims 71 to 84  
20 wherein the cellulosic based substrate or matrix is impregnated and/or dosed with vapour active pyrethroid in an amount of about 1170-2880 mg/m<sup>2</sup> of surface area.

86. The use of the packaging means of any one of claims  
25 71 to 85 for controlling any one of mosquitoes, flies, gnats, sandflies, midges, moths.

87. The use of the packaging means of any one of claims  
71 to 86 for controlling mosquitoes.

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88. An indicator for indicating the end-of-life (EOL) of a packaging means for retaining and emanating a vapour

active pyrethroid comprising a counter, an indicator display located on the counter and a gear mechanism adapted to rotate the counter one increment each time the packaging means is extended from closed position to an open position such that a user is able to ascertain from the display when the packaging means is substantially depleted in vapour active pyrethroid thereby having reached the EOL.

10 89. The indicator of claim 88 wherein the gear mechanism is adapted to rotate the counter one increment each time the packaging means is collapsed from an open position to a closed position.

15 90. The indicator of claim 88 or claim 89 wherein the gear mechanism is adapted to rotate the counter one increment each time the packaging means is extended from an open position to a closed position and collapsed from an open position to a closed position.

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91. The indicator according to any one of claims 88 to 90 wherein the indication is by means of a graphic display.

25 92. The indicator according to claim 91 wherein the graphic display comprises a change in colour as an indicator of EOL.

91. The indicator according to claim 91 wherein the graphic display comprises a gradation in colour as an indicator of EOL.

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93. The indicator according to claim 91 wherein the graphic display comprises a numerical display as an indicator of EOL.

5 94. The indicator according to claim 91 wherein the graphic display comprises a series of dots of changing size as an indicator of EOL.

95. The indicator according to any one of claims 88 to 94  
10 wherein the user is able to set the EOL indicator to a desired EOL period.

96. The indicator according to any one of claims 88 to 95 wherein the user is able to reset the EOL indicator.